USER MANUAL

HG 8 HOT SPRAY SCRAPER

HEDENSTED GRUPPEN

CONTENTS

HG 8 HOT SPRAY SCRAPER

	Topic	Page
1	Safety regulations	3
2	Transport and manoeuvring	5
3	The machine's functional units	6
4	Operation of the touch display	13
5	Replacement/adjustment of scraping rollers	18
6	Alarms	19
7	Set-up and connection	22
8	Operating the machine	23
9	Maintenance and storage	24
10	Troubleshooting	26
11	Technical data	27
12	Warranty	28
13	Service documentation	30
14	Scraping rollers and spare parts	32
15	Declaration of conformity	33

1 Safety regulations

Read the manual

Machine operators must read the manual carefully and receive training in the machine's functions before starting to work with it. If operators are ignorant of certain details, they may be at risk of physical injury when operating the machine.

Explanation of pictograms

WARNING! Accumulated high voltage

The machine is supplied with electrical power from two connections.

Before the electricity cabinets can be opened, **you must** disconnect both connections and wait for at least 10 minutes. The reason for this is that the machine's frequency converter may contain accumulated high voltage that can produce extremely powerful electric shocks.

NB: Interfering with the set-up of the frequency converter may cause a risk of serious personal injury and/or damage to the machine.

WARNING! Hot components

Do not touch any of the components in the machine's hot water system, which carries water at a temperature of 60 °C. As a result, the surfaces of the components are always hot and may cause discomfort or burns.

WARNING! Crushing risk

Do not hold the tip of the fleshing beam when starting a scraping sequence.

The beam moves towards the hole for the scraping rollers, where there is a risk that your hand may become trapped. Release the start button if there is any indication of risk. This will return the beam automatically to its starting position.

There is also a crushing risk if you activate a function in the <Manual> menu on the touch display while the doors are open. For this reason, the machine may only ever be operated by one person at a time.

WARNING! Ear protectors compulsory – eye protection recommended

Both the operator and any people in the immediate vicinity of the machine must wear ear protectors as the noise level exceeds the normally permitted level.

Operators and any people in the immediate vicinity of the machine should also wear protective goggles, because the machine may eject hair, sawdust and other detritus when it is operating.

The word **WARNING!** *next to a text in the manual indicates that failure to follow the instructions may result in personal injury.*

1.1 Use

- The machine is intended exclusively for the industrial scraping of mink skins so as to remove fat from the skins before they are dried.
- The machine must only ever be operated by one person at a time.
- Operators must be over 18 years of age, in good health with normal mobility and physical attributes.

1.2 Training

- Before starting to work with the machine, operators must read the instructions in this manual carefully and familiarise themselves with the correct operating procedure – in consultation with an experienced instructor, if appropriate.
- These instructions should emphasise:

  1) The need to be careful, thorough and focused when working with the machine.
  2) The need to ensure that the operator maintains a good overview of the area around the machine.

- The operator is responsible for any and all accidents and/or dangerous situations that may arise in respect to other people.

The most common causes of accidents are:

1) Lack of concentration
2) Operators who are insufficiently familiar with the machine.

1.3 Positioning, spatial requirements, etc.

- The machine must be positioned indoors on a flat, solid surface.
- There must be at least 70 cm of free space around all operating areas, as well as a ceiling height of at least 250 cm.
- Operation is performed within normal reach from the operating position in front of the fleshing beam.
- The lighting level must be at least 300 lx in all places where work is being done on or with the machine.
- The area around the machine must be kept neat and tidy to prevent accidents involving tripping and falling.
- Cables and hoses used to supply the machine must be laid out so that they do not constitute a risk – above head height or in appropriate cable trays on the floor, for example.

1.4 Preparation

- When operating the machine, make sure not to wear loose clothing that may catch on the tip of the fleshing beam or in the scraping rollers. In addition, make sure to wear footwear with firmly gripping sole to prevent the risk of slipping.
- Always keep grease, oil and other such materials for maintaining the machine in holders approved for the purpose. Store these materials out of reach of children and non-authorised persons.

1.5 Noise level

- The operator and any other people in the immediate vicinity of the machine must wear ear protectors while the machine is operating, as the noise it generates exceeds the normally permissible level. The noise level at the operator's station has been measured at 95 dB(A) / 98 dB(C).

1.6 Maintenance

The machine should be cleaned every day when it has been particularly affected by grease, sawdust, fur and dirt. A compressed air pistol and a hot water pistol are supplied with the machine. Do not spray water directly on electrical components, including the small sensors used to inform the operator of any faults/errors during the work process.

Visually inspect the machine to check the following:

- That there are no leaks in the air system (hoses, etc.)
- That all bolts, nuts, etc. are securely tightened

The manual describes how the machine should otherwise be maintained.

1.7 Dismantling / Disposal

When the time comes to dispose of the machine, contact your local dealer to ensure that the machine is dismantled and disposed of in the most environmentally appropriate manner.

2 Transport and manoeuvring

A crane must be used to transport the machine, which weighs 1,500 kg. It features three lifting points identified by hook labels on the machine itself.

WARNING! The machine weighs 1,500 kg and must only be lifted using a crane fitted with approved equipment and operated by persons who have received the appropriate training.

When the machine has been delivered and lifted down onto the ground, use the specially developed transport wheels to manoeuvre it into position in the pelting station.

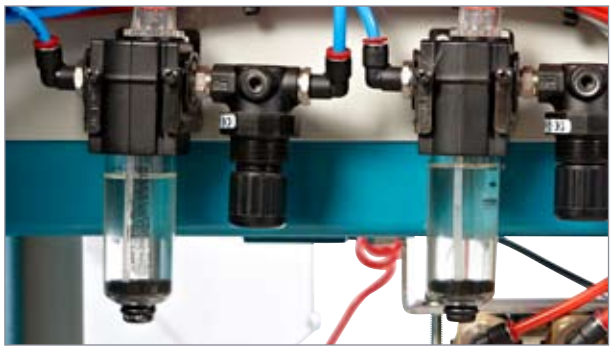
Use a jack to lift the machine's legs one by one. Fit the wheels into the purpose-built holes in the legs. Secure the wheel axle using a washer and bolt, and then lower the jack so that the leg rests on the wheel. Once the machine has been manoeuvred into position, reverse the process to remove the wheels one at a time.

WARNING! Do not attempt to move the machine using equipment other than the three transport wheels developed specifically for the purpose, which you can order from HG.

3 The machine's functional units

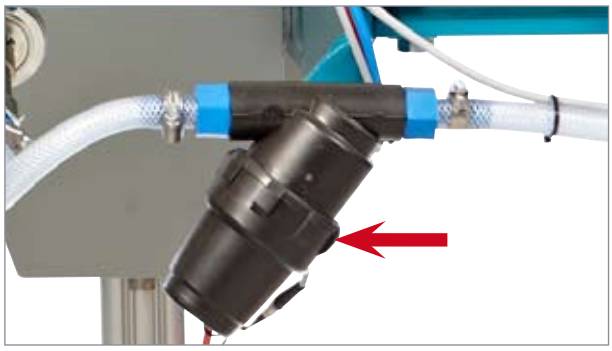
1 Filling oil for the lubrication system
2 Water filter
3 Air supply connection
4 Drain – condensation water
5 Plugs for connecting electricity supply
6 Water heater
7 Thermostat, water heater
8 Overheating protection, water heater
9 Filling cap for coolant for the beam heater
10 Thermostat, beam heater
11 Water supply connection
12 Drain – water
13 Overpressure valve
14 Main switch
15 Electrical cabinet 1
16 Electrical cabinet 2
17 Compressed air cabinet
18 Fleshing beam
19 Support roller
20 Temperature gauge
21 Beam washer
22 Access to scraping rollers
23 Sawdust dispenser
24 Skin remover
25 Connection of throughput drum
26 Fat pump
27 Fat discharge
28 Compressed air pistol
29 Hot water pistol
30 Emergency stop (2 locations)
31 Start panel
32 Operating panel with touch display

3.1 Filling oil for the lubrication system



The two glass containers for filling lubrication oil are mounted behind the machine. Gently press the glass container upwards and unscrew it. Use mist lubrication oil.

3.2 Water filter

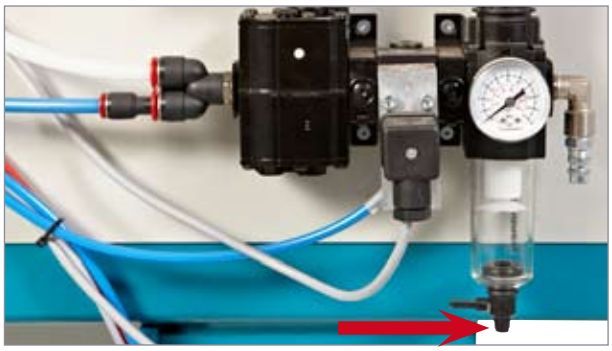


Check the water filter and clean as required. Unscrew the cover to access the filter.

3.3 Air supply connection

The machine requires compressor pressure of at least 7 bar and an air flow of at least XX litres per minute. Use a type Cejn 320 coupling to connect the air supply.

3.4 Draining – condensation water



Open the tap to drain the condensation water. Use a suitable container to collect the liquid so that it does not spill onto the floor.

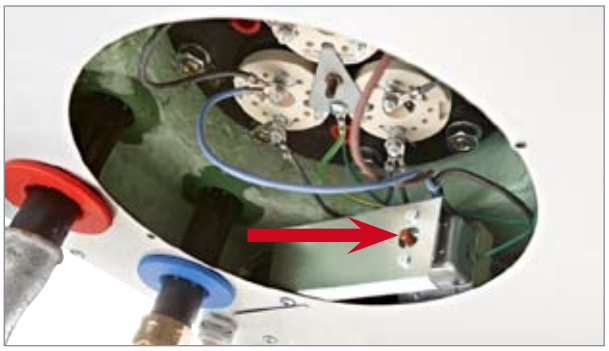
3.5 Plugs for connecting electricity supply

The machine uses two plugs: a 32 A CEE plug and a 16 A CEE plug for connecting a 3 x 400 Volt power supply with neutral (N) and earth (PE) conductors. The ground fault circuit breaker (HPFI) for the 32 A plug must be approved for frequency converters.

3.6-7 Water heater

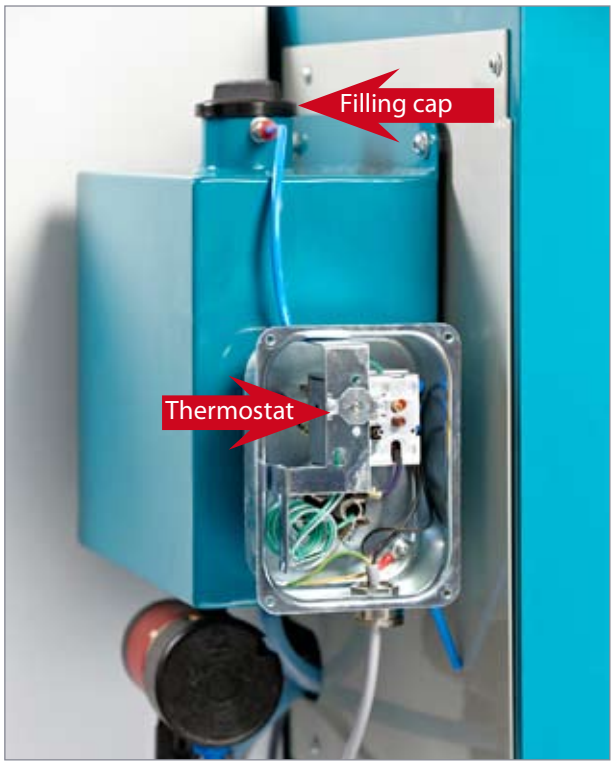
The thermostat for setting the water temperature in the spray system is mounted on the water heater. Set the thermostat at 60 °C (approx. "7 o'clock" on the dial) and wait until the water reaches the right temperature. When the water heater is switched on, the red light below the thermostat will be illuminated.

3.8 Overheating protection for the water heater



If the container's overpressure fuse cuts out, you will need to remove the cover from the base of the water heater and press the red <Reset> button.

3.9 Filling coolant

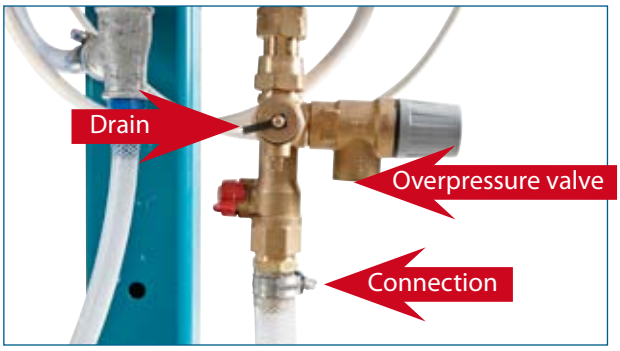


Fill coolant for the beam heating system so that, when cold, there is a gap of 4–5 cm from the surface of the fluid to the top of the boss. Check regularly to make sure that the volume of fluid remains at approximately the same level.

3.10 Thermostat for setting beam heat

Use the thermostat in the box next to the coolant to adjust the beam temperature. Set the temperature to between 32 °C and 38 °C. **WARNING!** If the beam is too hot, you risk damaging the hair side of the skin.

3.11–13 Water supply connection

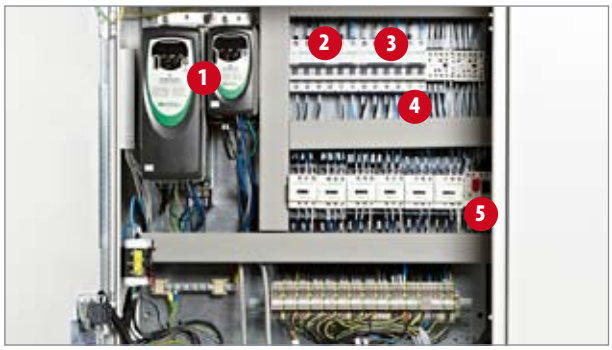


Connect the water heater to a supply of ordinary, cold tap water. To open the water supply, turn the red tap so that the "wings" are vertical. The water heater is fitted with an overpressure valve, which is activated if the water boils. Use the drain valve for frost protection.

3.14 Main switch

When the main switch is set to <OFF>, there is no power connected to the machine. Turn the switch to <ON> when you want to operate the machine. You must make sure to lock the main switch in the <OFF> position when performing repairs or maintenance on the machine.

3.15 Electrical cabinet 1



In the first electrical cabinet from the left, you will find:

1 frequency converters
2 automatic fuses for the frequency converters
3 fuses for the beam heater/spray system
fuses for the power plug for the throughput drum
4 fuses for the control current
5 motor protection switch for the fat pump

WARNING! Before the electricity cabinets can be opened, **you must** disconnect both connections and wait for at least 10 minutes. The machine's frequency converters contain accumulated high voltage which can produce extremely powerful electric shocks.

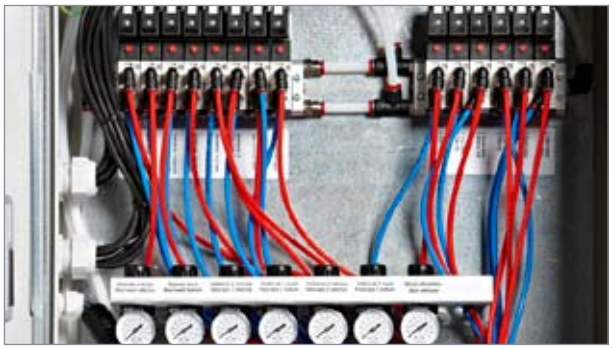
NB: Interfering with the set-up of the frequency converter may cause a risk of serious physical injury and/or damage to the machine.

3.16 Electrical cabinet 2

The middle cabinet contains the motor protection switches for the eight scraping rollers. From left to right, these switches protect the following motors:

1 Right-hand side 1
2 Left-hand side 1
3 Top 1
4 Bottom 1
5 Top 2
6 Bottom 2
7 Right-hand side 2
8 Left-hand side 2

3.17 Compressed air cabinet



This cabinet contains the compressed air gauges for the beam washer, fat scrapers and skin remover. The panel states what is measured where.

3.18-20 Fleshing beam

The fleshing beam is heated to a temperature of between 32 °C and 38 °C. The support roller ensures that the beam remains stable while the top rollers are scraping the neck. From the operator's station, you can check the beam temperature at the temperature gauge positioned at an angle behind the fleshing beam.

3.21 Beam washer

The beam washer consists of two sets of rubber wipers which, together with the hot water spray, are used to keep the beam clean.

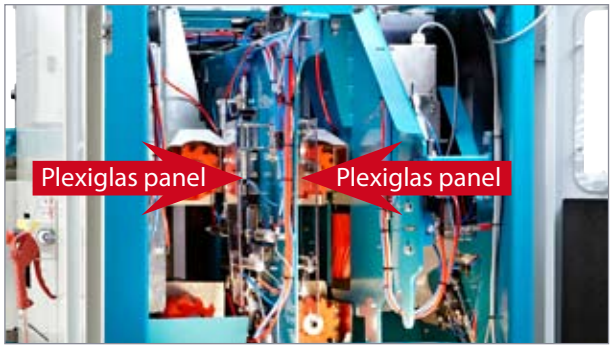
3.22 Access to the scraping rollers

You can access the eight scraping rollers from three sides of the machine. For safety reasons, you cannot use the machine for scraping until all the access routes to the scraping rollers have been closed correctly. Therefore, it is essential that you know where and how to open and close the doors.

WARNING! It is possible to activate several functions manually while the doors are open. Because this constitutes a risk of crushing, the machine must only ever be operated by one person at a time.

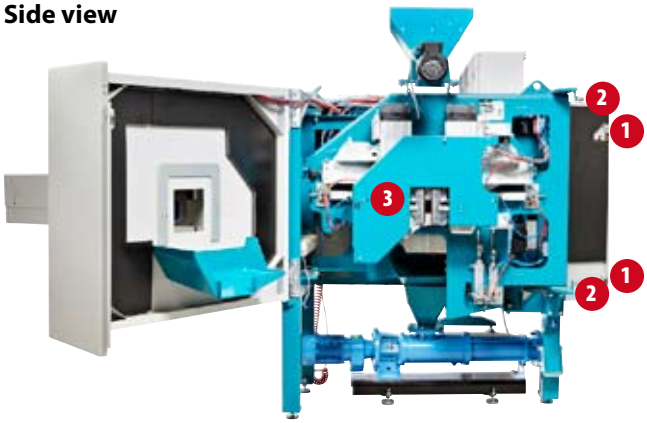
From the front

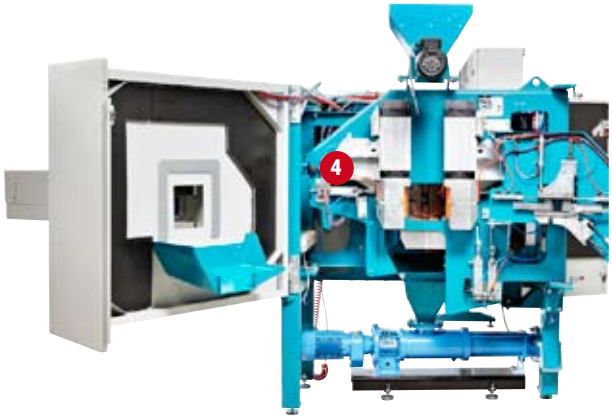
There are handles on all the exterior doors. In addition, there are closing and locking mechanisms in the places indicated here. These principles also apply to the rear access routes.

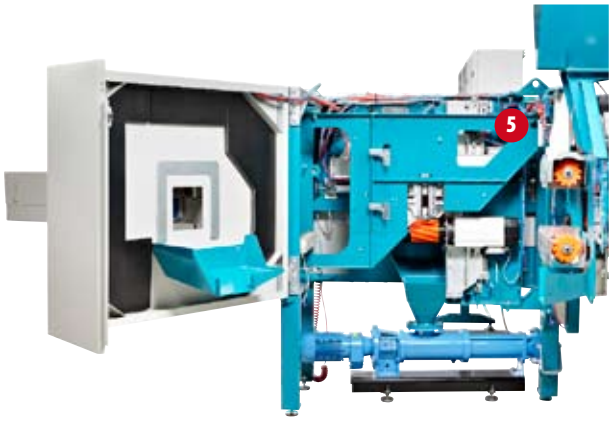


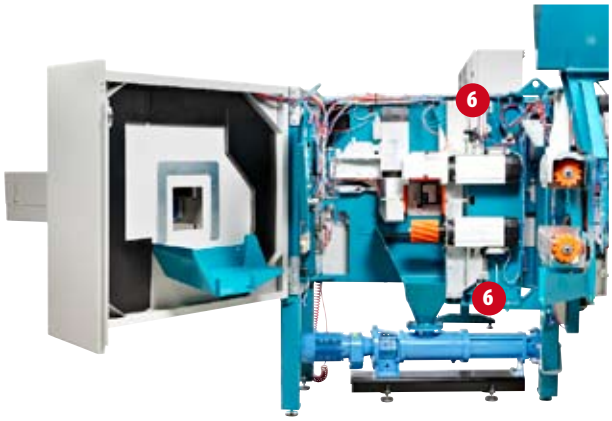
NB: Make sure to close the plexiglas panels against the assembly fitting when you open the panel from the side (No. 5 on the photo to the right).

Side view

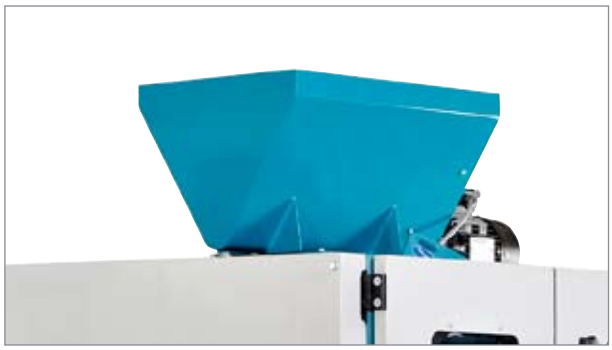






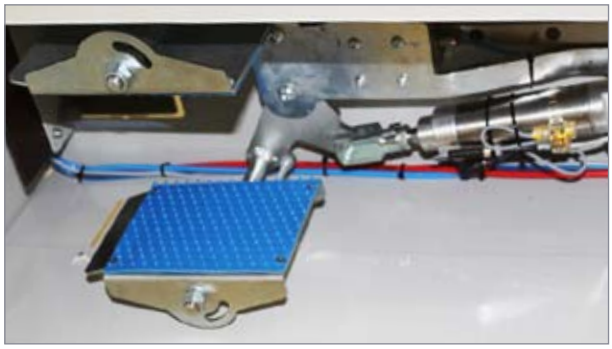


3.23 Sawdust dispenser



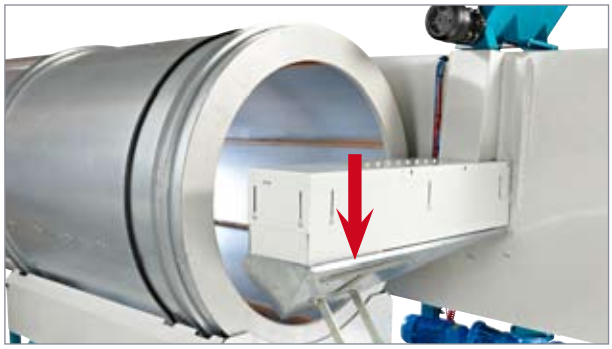
After the scraping sequence, the skin is automatically coated with sawdust before it is removed. Extra high sides for the automatic dispenser are available from HG.

3.24 Skin remover



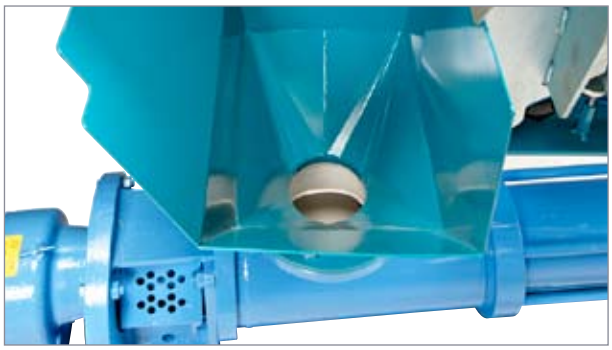
Once the skin has been fully processed, it is automatically removed from the fleshing beam and allowed to drop – directly into a throughput drum, if appropriate.

3.25 Connection of throughput drum



When a throughput drum is used in direct extension to the machine, the drum funnel must be positioned so as to prevent the risk of body parts being crushed between the funnel and the casing containing the skin remover. The shield must be adjusted to match the equipment on site, and additional shields must be added if there are any openings wider than 8 mm.

3.26-27 Fat pump



The fat falls into the fat pump, which can transport it over a distance of up to 40 metres. Fit a fire hose between the fat discharge and the fat container.

3.28 Compressed air pistol

The compressed air pistol is used for cleaning those parts of the machine where it is inappropriate to use water. Wear protective equipment in accordance with the regulations that apply to the use of compressed air.

3.29 Hot water pistol

The hot water pistol is used for cleaning funnels and the fat pump. **NB:** Always wear gloves when using the pistol. The water temperature is approx. 60 °C, which is hot enough to cause burns to exposed skin.

3.30 Emergency stop

There is an emergency stop button on the start panel and above the fleshing beam on the first electrical cabinet. If an emergency stop button has been activated, turn it clockwise to release it and press <Reset> on the operating panel below the touch display.

3.31 Start panel

1 Start scraping sequence with scraping pressure/speed set to NORMAL
2 Start scraping sequence with scraping pressure/speed set to HARD
3 Start scraping sequence with scraping pressure/speed set to SOFT
4 Emergency stop

3.32 Operating panel with touch display

5 Touch display (see next section)
6 Reset emergency stop and safety locks on doors
7 Start the machine
8 Stop the machine
9 Manual: beam backwards
10 Manual: beam forwards
11 Automatic sequence – The button lights up when you have kept the start button depressed long enough and the automatic sequence has taken over. Then, release the start button.

4 Operation of the touch display

4.1 Main menu

1 Operation
2 Choise of programme
3 Options
4 Technical information
5 Counters
6 Manual functions
7 Choose language

You can use the touch display to adjust the machine settings to match the properties of the skins – and your own particular preferences.

The programme also contains a range of useful statistical information.

Simply touch the icon for the menu you wish to access. Then touch the individual values in the program to change them. This will call up a numerical keypad that you can use to enter the relevant value. Press <ENTER> to save the new value or press <ESC> to exit the menu without saving the change.

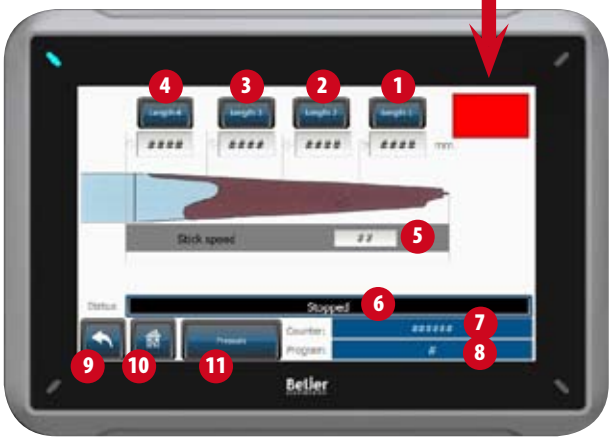
When you are working in the operation menu, a warning will be displayed if you deactivate a function under "Functions".

4.2.1 Operation menu – pressure

1 Set scraping pressure (bar)
2 Set zone lengths (mm) *
3 Machine status: Auto/manual
4 Skin counter
5 Current programme
6 Go to previous page
7 Return to main menu
8 Switch to speed menu

* For autumn animals, zones 1 and 2 are treated as a single zone, with the same value from the snout to a point just past the front legs. For spring animals, zone 1 refers to the area from the snout to a point just before the front legs, while zone 2 covers the area around the front legs and zone 3 refers to the rest of the animal.

4.2.2 Operation menu – speed



1-4 Set scraping lengths (mm)
5 Set scraping speed (Hz of max.)
6 Machine status: Auto/manual
7 Skin counter
8 Current programme
9 Go to previous page
10 Return to main menu
11 Switch to pressure menu

4.3 Programme menu

1 Access a programme you have saved previously
2 Save the current settings as a programme
3 Import a programme from a memory (internal/external)
4 Export a programme to a memory (internal/external)
5 Delete a programme
6 Go to previous page
7 Return to main menu

4.3.1 Programme menu: Import/Export

When you call up the "Import/Export" menus, you will see this screen. You can then choose which type of memory you wish to use:

1 External USB pen
2 External SD card
3 Internal memory

4.4 Settings menu

The machine settings menu contains five screens, which you can use to enter new values for:

1 Adjusting scraping rollers
2 Hard/Soft values
3 Activate/deactivate functions
4 Running the sawdust dispenser and fat pump
5 Where the rollers are to cut out

4.4.1 Adjusting scraping rollers

This menu provides assistance with adjusting the scraping rollers.

Start by pressing <STOP> on the operating panel. Then press the left-hand side of the button for the relevant roller to adjust the value. Then press the whole field, which will turn green.

Then press <START> on the operating panel. Keep the button depressed until the beam reaches the length entered and the rollers cut in.

You can now physically adjust the rollers – see Section 5.

4.4.2 Hard / Soft

Use this menu to define how the machine is to operate when you use the <SOFT> and <HARD> buttons on the start panel. You can increase or decrease the pressure, speed and length settings and thus adapt the scraping process to match the individual skin types.

4.4.3 Activate/deactivate functions

You can use this menu to switch the various automatic functions in the scraping process <ON> and <OFF>. You can also use this menu to check the processes individually.

4.4.4 Sawdust and fat pump

Use this menu to decide how much sawdust to apply, and to choose how often the fat pump is to run. **NB!** Make sure that the pump does not "run dry", as tendons will otherwise have a tendency to stick.

4.4.5 Where the rollers cut out

Use this menu to adjust how far the individual scraping rollers are to scrape the skin before they cut out. The length refers to the distance (in mm) from the point where the beam is fully inserted to the point where the rollers are to cut out.

4.5 Technical menu: Status input

Use this screen to monitor the machine's computer and see the inputs and outputs running to and from the machine. Press (1) to switch to Output.

Under <Std data> (2), you can enter the machine's standard data, i.e. the standard settings with which it was delivered. Press the button and keep it depressed for 5 seconds to enter the original data.

NB! This will change everything back to the original factory settings!

4.6 Counter menu

This menu provides an overview of both the day's production and total production for the machine. The menu also shows how many skins have been processed per set of scraping rollers, cycle time and beam counter.

1 Displays the day's production which, as necessary, can be adjusted using the <+1> and <-1> buttons on the right-hand side, or reset using the <Reset> button.

2 Displays total production for the machine's service life.

3 Displays the number of skins processed – press <Reset> to reset the counter.

4 You can set the alarms for changing the scraping rollers to display a reminder on the screen when the number entered has been reached. The reminder will appear no matter which menu you are viewing on the display. Remember to reset the counters after replacing rollers.

5 The cycle time shows how many seconds it took to process the most recent skin.

6 The beam counter shows how far from the starting position the fleshing beam is located (measured in mm).

4.7 Manual menu

When the machine is in <Stop> status, you can run a number of automatic functions manually.

To start with, press <Stop> on the operating panel and then access the menu.

1 By switching the machine's water nozzles on and off manually, you can check whether they are spraying the water correctly.

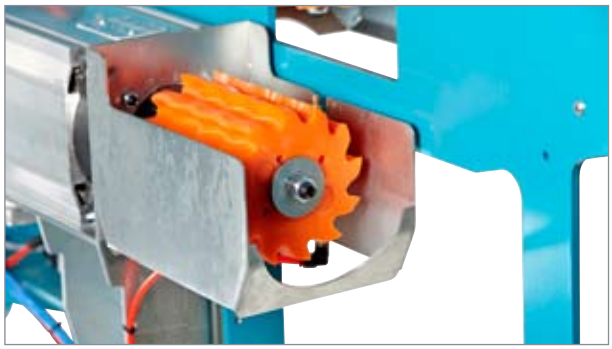
2 Here, you can activate the sawdust dispenser motor manually (forward/reverse).

3 Here, you can activate the fat pump motor manually (forward/reverse).

4 You can open and close the beam washer manually – when it is time to replace the rubber wipers, for example. If "Open Beam Washer" is activated, the machine cannot operate for safety reasons.

5 Replacement and adjustment of scraping rollers

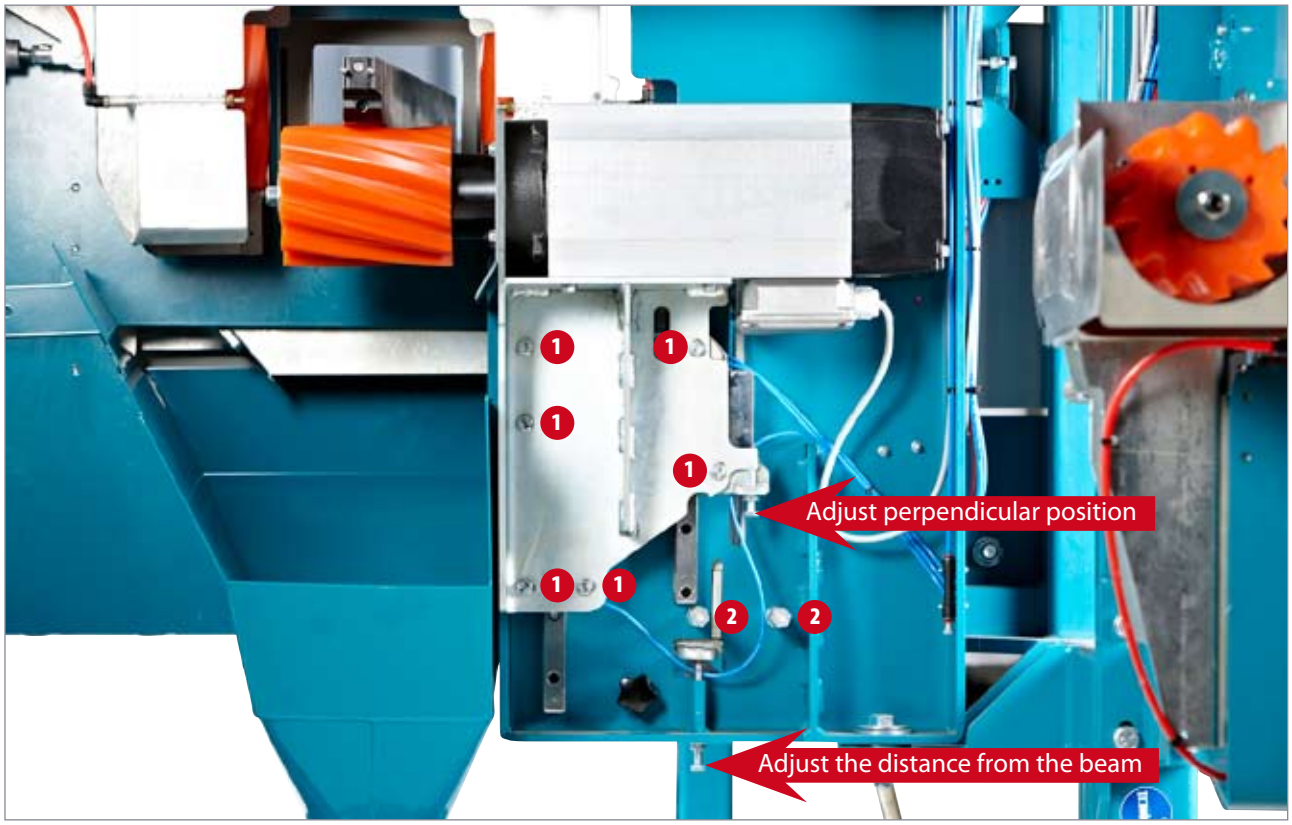
5.1 Replacement



HG recommends that you replace the scraping rollers for every 6,000 skins processed. Unscrew the nut on the end of the roller and remove the washer. Release the scraping roller and replace it with a new one. Replace the washer and nut, and securely tighten the nut. Replace the nut as required.

NB: Make sure not to over-tighten the roller. Screw the nut in until the washer is lying flush against the roller. Then give the nut one more turn.

5.2 Adjustment



The adjustment process is the same for all eight scraping rollers. You can adjust two aspects:

1 Perpendicular position in relation to the beam

2 Distance from the beam, which determines when the roller actually makes contact and catches hold of the skin.

1 **Perpendicular position**
Loosen bolt no. 1. Use the bolt indicated by the arrow to adjust the perpendicular position. Retighten bolt no. 1.

2 **Distance**
Loosen bolt no. 2. Use the bolt indicated by the arrow to adjust the distance from the beam. Retighten bolt no. 2.

NB: Only one person at a time may work on the machine during adjustment.

6 Alarms

The machine is fitted with 12 sensors that can stop operation if they do not receive a "clear" signal.

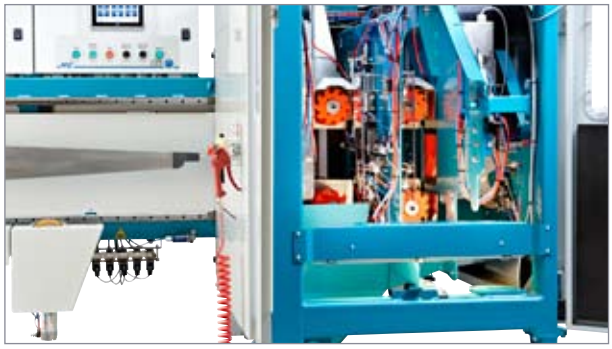
If you have attempted to activate a function for more than three seconds without anything happening, an alarm will appear in the touch display.

If you rectify the error and the sensor still fails to provide a "clear" signal, you may need to adjust or even replace the sensor.

6.1 Emergency stop cut out

One of the emergency stops has cut out. Reactivate the emergency stop and press <Reset>.

6.2 Door open



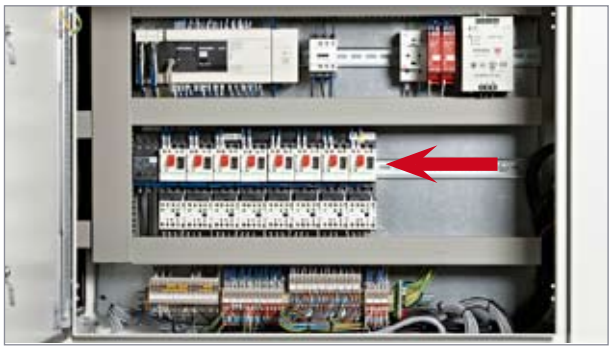
One or more doors has not been closed and locked correctly. Close and lock the door(s) and press <Reset>.

6.3 Thermo-error, motors

One of the machine motors has been overloaded. This may be one of the eight motors that operate the scraping rollers or the motor for the fat pump. Check whether there is any fat, fur or dirt around the motor or in its cooling channels. Remove if necessary.

WARNING! Make sure to disconnect both power connections and wait for at least 10 minutes before opening the electrical cabinets.

1.3.1 For the scraping rollers



The motor protection switches for the scraping roller motors are located in the middle electrical cabinet. If a red button is "in", then the motor has cut out. Press the black button in if the motor protection switch has cut out.

6.3.2 For the fat pump

The motor protection switch for the fat pump is located in the electrical cabinet to the left. Press the black button in if the motor protection switch has cut out.

Contact the HG service department if you are unable to rectify a fault after repeated efforts to do so.
Tel. +45 75 89 12 44 · 24-hour hotline: + 45 20 21 30 44

6.4 Error – frequency converter

One of the frequency converters has cut out. Check whether there is a fault in the sawdust dispenser motor or the beam driver. Press <Emergency stop> and wait 30 seconds before re-setting the error.

WARNING! Make sure to disconnect both power connections and wait for at least 10 minutes before opening the electrical cabinets.

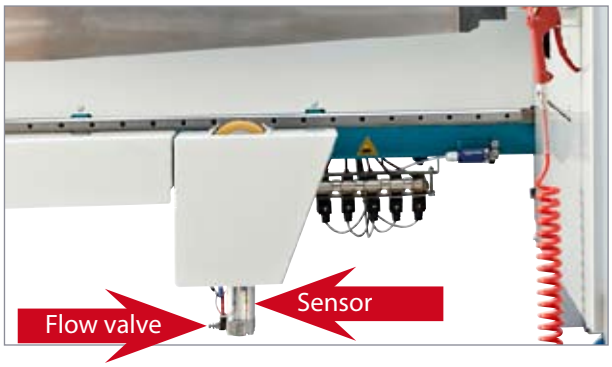
6.5 Cannot start

The machine cannot start because the beam is not in its starting position. Use the <Stick rev.> button to return the beam to its starting position.

6.6 Manual operation not possible

Press <Stop> to interrupt the auto-sequence function.

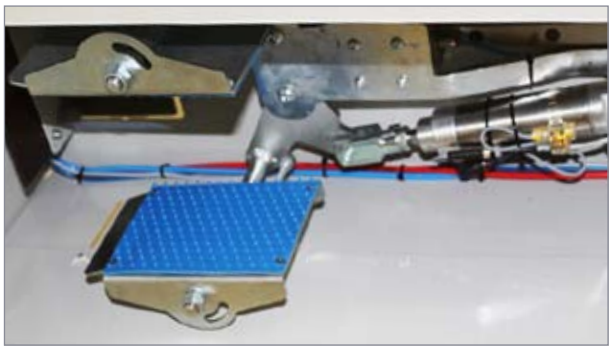
6.7 Error – support roller



The "Support roller not down" alarm appears if the support roller is not down when it should be. Check the sensor, which you may need to adjust or replace.

The "Support roll not down quickly enough" appears if the support roller does not come down quickly enough when it should. Use the <Stick rev.> button to return the beam to its starting position and adjust the flow valve so that the roller comes down more quickly.

6.8 Skin remover not open



This alarm appears if the skin remover is not open. Press <Stop> and check that the jaw panels are open and that the sensor is active (illuminated yellow).

Contact the HG service department if you are unable to rectify a fault after repeated efforts to do so.
Tel. +45 75 89 12 44 · 24-hour hotline: + 45 20 21 30 44

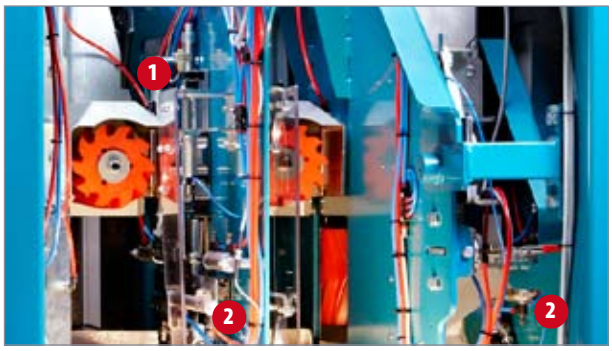
6.9 Error – beam washer

The "Beam washer, vertical not up" and "Beam washer, horizontal not out" appear if the beam washer sides are not open when they should be. Press <Stop>, remove the front panel from the beam washer and check the sensors. (The arrows indicate where the sensors are positioned behind the panel).

6.10 Beam washer opened manually

the "Cannot start – beam washer opened manually" alarm appears, access the "Manual" menu and deactivate the "Open beam washer" function.

6.11 Error – fat scraper



The "Fat scraper, vertical cleaner not out" and "Fat scraper, horizontal cleaner not out" appear if the relevant sensors do not have a "Clear" signal. 1) indicates the position of the sensor for the vertical scraper, and 2) shows the position of the horizontal ones. Press <Stop>, check that there is nothing caught near the sensors and that they are active (illuminated yellow).

6.12 Low air pressure

This alarm appears if there is too little air pressure in the machine. Check the air supply.

Contact the HG service department if you are unable to rectify a fault after repeated efforts to do so.
Tel. +45 75 89 12 44 · 24-hour hotline: + 45 20 21 30 44

7 Set-up and connection

7.1 Set-up

Position the machine indoors on a level, solid floor, with at least 70 cm of free space in the area where work is done on the machine. The ceiling height is to be at least 250 cm.

Remove the transport wheels (see Section 2) and adjust the leg height so that the machine is stable and level (both vertically and horizontally).

The operator operates the machine from a standing position next to the fleshing beam. In accordance with the EN 12464-1:2002 standard, the work area must be illuminated with at least 300 lx.

7.2 Connection

Water

Connect the machine's hot water container to a standard cold water tap with water pressure of 3 bar. If the pressure is below 3 bar, a pump can be inserted to ensure that the machine water nozzles provide optimal water spray.

Electricity

The machine is fitted with two plugs: a 32 A CEE plug and a 16 A CEE plug for connecting a 3 x 400 Volt power supply with neutral (N) and earth (PE) conductors. The ground fault circuit breaker (HPFI) for the 32 A plug must be approved for frequency converters.

Air

The machine requires compressor pressure of at least 7 bar and an air flow of at least xxx litres per minute. Use a type Cejn 320 coupling to connect the air supply. To avoid interruptions to the scraping process, make sure that the air supplied to the machine is free from water, dirt and rust from old pipes.

WARNING! It is important to connect the water supply and air the water heater with the hose pistol before connecting the power supply. Otherwise there is a risk of damaging the heating element.

WARNING! Do not leave air and water hoses and electricity cables lying unsecured on the floor, as this constitutes a risk of physical injury.

8 Operating the machine

1 Install and set up the machine as described on the previous page.
2 Fill the hot water container with water
3 Fill air line lubricant
4 Connect the power supply and turn the main switch to <ON>
5 Check that the emergency stop buttons have been deactivated and that all doors are securely closed.
6 Press <Reset>. If the emergency stop circuits are OK, the <Reset> button will light up green. The control current and the compressed air system will now be activated.
7 Wait until the beam and the water in the hot water container reach the correct temperature.
8 Press <Stick rev.> to ensure that the beam is in its starting position.
9 Place the skin on the beam and press <Start-up>.

WARNING! Never attempt to reach in behind the machine shields while the machine is operating. This constitutes a serious risk of crushing.

8.1 Positioning skins on the beam

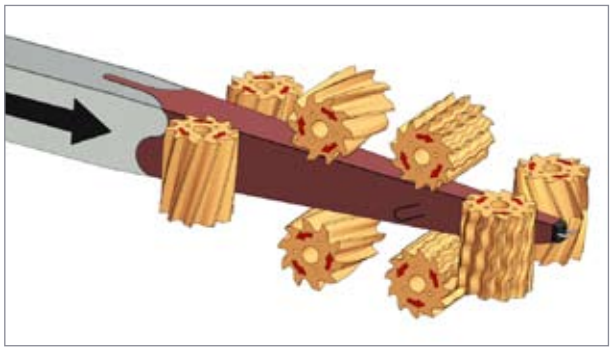
Pull the skin onto the beam with the leather side out and the head at the pointed end of the beam. Stick the two spikes on the front of the beam through the eye holes, and lay the tail on the top side.

Then pull the front of the skin – i.e. the part around the head and front legs – firmly onto the beam so that the scraping rollers make appropriate contact.

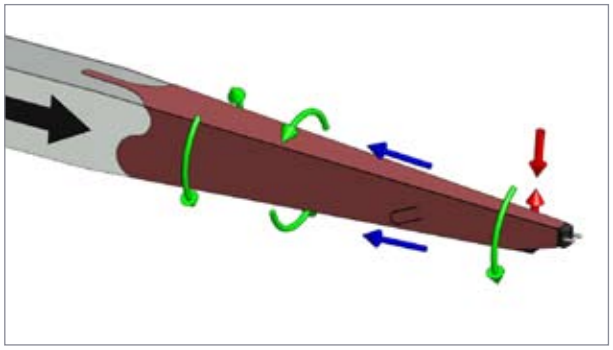
Choose the mode – NORMAL, SOFT or HARD – depending on the skin properties. Keep the button depressed until the beam has entered approx. 20 cm and the Auto light shines green.

If you release the button before the Auto light is illuminated, the beam will return to its starting position for safety reasons.

8.2 The scraping sequence



The skin is processed using two sets of four scraping rollers. All eight rollers are sprayed with hot water during the scraping process. This ensures optimal processing and leads the fat away from the skin.



The design of the scraping rollers ensures that the skin is twisted slightly so that the fat is also scraped off that part of the skin positioned on the edges of the fleshing beam.

After each set of scraping rollers, a fat scraper is used to remove the liquid fat from the skin.

The beam will continue to move forward up to the scraping distance you defined in the programme, and the skin remover will then remove the skin.

The beam washer and water nozzles are activated while the beam is returning to its starting position.

The machine is now ready for the next skin.

9 Maintenance and storage

9.1 Daily maintenance

Daily maintenance comprises:

1 Normal cleaning of the machine
2 Cleaning the cooling ducts
3 Checking/cleaning the water nozzles
4 Checking the air line lubricant level
5 Checking/lubricating the nipples

WARNING! You **must** disconnect and lock the main switch in its <OFF> position before starting any maintenance work.

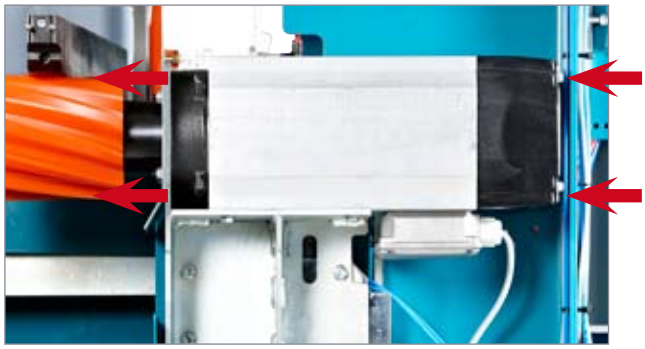
Normal cleaning

Use the compressed air pistol to remove fur and dirt from around the electrical parts of the machine. Use water/petroleum to clean off fat and grease. **NB** Always wear gloves when using the hot water pistol for cleaning. The temperature of the water in the pistol is 60 °C.

Cleaning the water nozzles

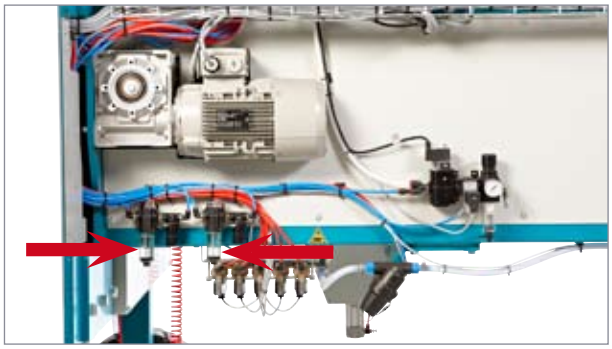
Check the water nozzles at regular intervals. There are six nozzles by the beam washer and one by each scraping roller. Activate the water nozzles manually as described in the "Manual menu" section on page 17.

Cleaning the cooling ducts



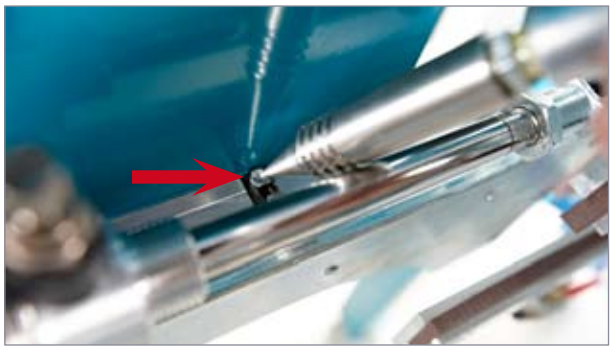
Each of the eight scraping rollers has a separate motor. Every day, use the compressed air pistol to blow any dirt out of the cooling ducts on each motor. Otherwise, there is a risk of the motor overheating.

Checking the air line lubricant level



The air line lubricant keeps the machine's bearings lubricated. Press the glass component on the oil container up and turn it anticlockwise. This will release the glass, which you can then top up with oil. Replace the glass component by pressing it up and turning it clockwise.

Lubricating nipples

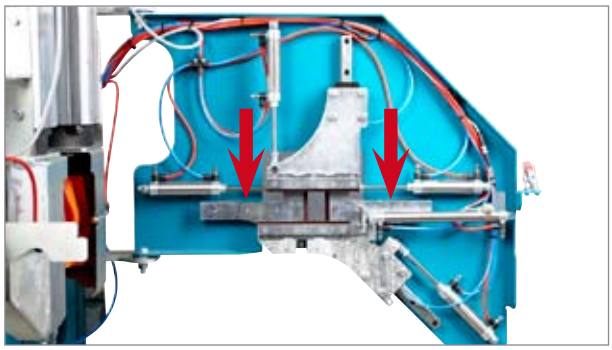


Most of the machine's bearings are lubricated automatically via the compressed air system. However, there are 12 bearings that you need to lubricate manually as required. Check whether the grease disappears into the nipple or simply flows over it. **NB:** Take care not to over-lubricate, as this can damage the bearings.

Lubrication nipples by the fleshing beam

The four lubrication nipples by the fleshing beam are located behind the beam suspension fitting.

Lubrication nipples by the fat scrapers



The bearings for the four side scrapers have to be lubricated manually. The arrows indicate the positions of the two lubrication nipples on each side scraper. The lubrication nipples for the other fat scraper are in corresponding positions.

9.2 Lubricants

Lubricate the guide rails with guide oil as required.
HG item no. 476590

As air line oil ("mist lubricator") we recommend VG 5 Q8 Dynobear. HG item no. 476560

As grease/rust protection for lubricating nipples, we recommend Q8 Rembrandt EP 2. HG item no. 476570

9.3 Protection devices

It is only permitted to remove any of the protection devices on the machine in connection with repairs or service procedures.

9.4 Storage

When you have finished work for the season, it is important to clean the machine thoroughly and make sure that it is properly lubricated.

Clean the machine with water/petroleum and blow it dry with compressed air. Then lubricate all the guide rails with guide oil.

Grease the lubrication nipples.

WARNING! If the machine is not to be stored in a frost-free location, check the coolant in the beam and drain all the water out of the hot water container.

10 Troubleshooting

Problem	Possible cause	Solution
Cannot reset an emergency stop	The doors are not closed The emergency stop is activated	Close and lock the doors Deactivate the emergency stop
The skins are fatty	Not enough water in the machine The water is not hot enough	Check whether any of the nozzles are blocked Check the water temperature
Tears in the skin around the head	The bottom roller is catching on the lip	Adjust the bottom roller to move it slightly away from the skin
Tears in the skin along the side	The side rollers are catching on the ears	Adjust the side rollers to move them slightly away from the skin
Loose hair on the skins	The scraping process is too hard for the type of skin	Reduce the scraping pressure If appropriate, switch to softer rollers
Fat pump stops	The pump is sucking liquid out of the tendons, which then get stuck	Upwardly adjust the number of cycles for activating the pump so that it does not run dry. Alternatively, reduce the running time.
The hot water container does not heat up	The fuse has tripped	Activate the fuse in the bottom of the hot water container.
There are streaks of fat along the skin, matching the edges of the beam	The scraping pressure is too high, which means that the skin cannot be turned.	Reduce the scraping pressure.

11 Technical data

HG 8 Hot Spray Scraper

Dimensions and weight	
Width	163 cm
Length	516 cm
Height	215 cm
Net weight	1,500 kg

Electricity	
Voltage	3 x 400V + N + PE
Connection	32A + 16A CEE
PLC control	220V + 24V DC
Ampère consumption	31,1A + 14,2A

Compressed air	
Air pressure	7 bar
Air consumption	XXX l/min
Connection	Cejn 320 quick release coupling

Capacity	
Skins per hour	230

12 Warranty conditions

Warranty period

HG provides a 12-month warranty, as from the date of delivery.

The warranty covers

- Components that have to be repaired or replaced on account of material defect or manufacturing error.

The warranty does **not** cover wearing parts and consumables such as:

- Scraping rollers and rubber parts.

The manufacturer's warranty shall be terminated in the event that:

- The machine is used incorrectly.
- The machine is used without the operator complying with the information in the instruction manual and safety regulations.
- The machine is not maintained according to the instructions supplied, or obsolete parts are used.
- The machine is used after a fault or defect has been identified, and the resulting repair is more expensive than the cost of repairing the original fault.

The owner's own insurance should cover:

- Fire, break-in, theft and vandalism
- Water and frost damage
- Damage caused by the weather

These are not covered by the manufacturer's warranty.

Approval of claims for compensation

Approval from the manufacturer of claims for compensation is conditional upon the defective part(s) being presented to the manufacturer or the manufacturer's representative within two weeks of the damage being identified. The right of ownership to the damaged part(s) shall be transferred to the supplier of the new part(s).

Only components can be replaced under the warranty, which therefore does not cover:

- Freight costs.
- Costs in connection with waiting time, the machine owner's working hours and travel expenses.
- Loss of earnings and other consequential expenses.

Other information

Before repairs under warranty are carried out, the manufacturer must be contacted to agree on the procedure. If the repair work has been initiated or completed, the cost of same cannot be claimed against the warranty.

The present warranty conditions can only be amended through a separate agreement.

WARRANTY CERTIFICATE

Version _____

Type/Chassis no. _____

Model/year _____

Delivery date _____

Seller/fitter _____

Company _____

Address _____

Signature _____

First owner _____

Address _____

Tel. _____

Second owner _____

Address _____

Tel.c _____

SPECIAL CONDITIONS _____

_____

_____

_____

Warranty certificate to be completed by an HG fitter/sales consultant.

13 Service documentation

HG recommends that, as a minimum, you have an annual season service performed on the machine.

Service no. 1

Service completed

Number of skins _____

Date _____

Work order no. _____

SIGNATURE

Service no. 4

Service completed

Number of skins _____

Date _____

Work order no. _____

SIGNATURE

Service no. 2

Service completed

Number of skins _____

Date _____

Work order no. _____

SIGNATURE

Service no. 5

Service completed

Number of skins _____

Date _____

Work order no. _____

SIGNATURE

Service no. 3

Service completed

Number of skins _____

Date _____

Work order no. _____

SIGNATURE

Service no. 6

Service completed

Number of skins _____

Date _____

Work order no. _____

SIGNATURE

HG recommends that, as a minimum, you have an annual season service performed on the machine.

Service no. 7

Service completed

Number of skins _____

Date _____

Work order no. _____

SIGNATURE

Service no. 10

Service completed

Number of skins _____

Date _____

Work order no. _____

SIGNATURE

Service no. 8

Service completed

Number of skins _____

Date _____

Work order no. _____

SIGNATURE

Service no. 11

Service completed

Number of skins _____

Date _____

Work order no. _____

SIGNATURE

Service no. 9

Service completed

Number of skins _____

Date _____

Work order no. _____

SIGNATURE

Service no. 12

Service completed

Number of skins _____

Date _____

Work order no. _____

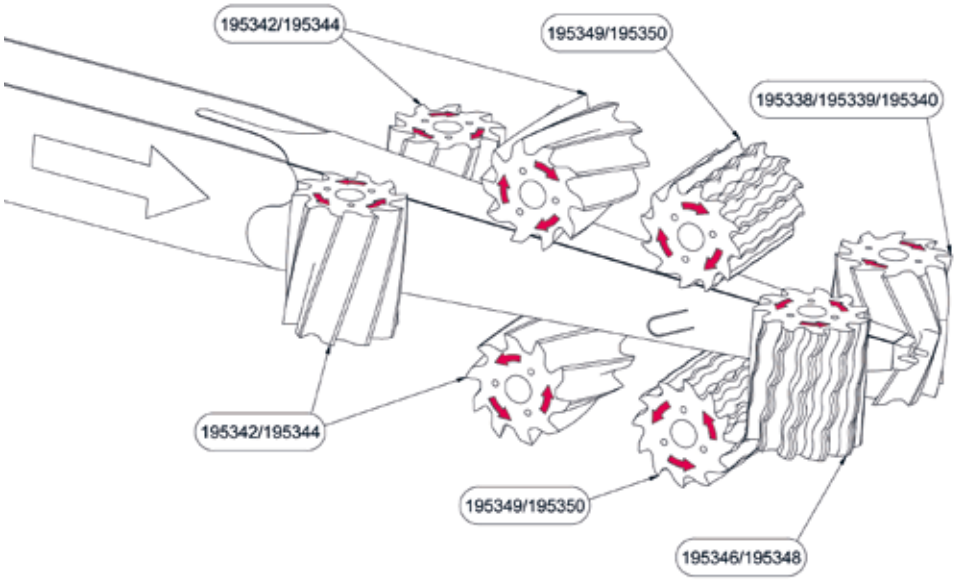
SIGNATURE

14 Scraping rollers and spare parts

0° wave | 20° straight CW | 10° wave CW | 10-tooth scissors

14.1 Scraping rollers

Per machine	2 pcs.	4 pcs.	1 pcs.	1 pcs.
Orange, Shore 84	195349	195342	195346	195338
Yellow, Shore 86	195350	195344	195348	195339
Grey, Shore 88				195340



14.2 Commonly used spare parts

Varenr.	HG 8 Hot Spray Skraber
M200297	Knobbled panel for skin remover
M200780	Rubber for vertical cleaner
M200825	Rubber scraper, 180 mm
M200835	Rubber for horizontal cleaner
M201085	Rubber for scraping screen
M201625	Angled rubber for beam washer
M21592	Rubber for sawdust channel

14.3 Circuit diagrams and spare parts appendix

Contact HG to order a supplementary manual containing air and electricity circuit diagrams and a spare parts appendix. You can also access this online at

www.hedensted-gruppen.dk.

15 EU Declaration of conformity

Hedensted Gruppen A/S
Vejlevej 15
DK-8722 Hedensted
Tel. (+45) 75 89 12 44
Fax (+45) 75 89 11 80
www.hedensted-gruppen.dk

Hereby declares that:

HG 8 Hot Spray Scraper
HG item no. 194005

conforms with:

· The Machinery Directive 2006/42/EC
· The Low Voltage Directive 73/23/EEC
· The ROHS Directive 2011/65/EU

under application of the following harmonising standards:

· DS/EN 12100-1:2005
· DS/EN 13857:2008
· DS/EN 60439-3

Hedensted, 1 August 2013

Jens Jørgen Madsen
CEO

HEDENSTED GRUPPEN

Vejlevej 15, DK-8722 Hedensted
Tel. (+45) 75 89 12 44
Fax (+45) 75 89 11 80
www.hedensted-gruppen.dk